

# ARNOLD ARBORETUM

## HARVARD UNIVERSITY



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**Among the Oaks.** A walk at this time through Oak Path from a point on the Meadow Road nearly opposite the Centre Street Gate to its junction with Azalea Path on the southern slope of Bussey Hill will be found interesting and instructive. This walk passes by the first Oaks which were planted in the Arboretum. Beautiful views toward the west, including the Juniper Collection and Hemlock Hill, can be obtained from it, and before it joins Azalea Path it will pass by some of the handsomest Azaleas in the Arboretum.

Oaks have the reputation of growing slowly, and owing to this reputation are often neglected by planters. The Oaks which can be seen from Oak Path were planted in their present position from thirty to forty years ago when they were seedlings only a few inches high. The largest of them are taller with thicker trunks than other hardwood trees like Hickories, Walnuts, Elms, Maples, etc., planted at about the same time. The tallest of the Oaks planted in the Arboretum are Pin Oaks (*Quercus palustris*), and the tree with the thickest trunk is a hybrid between the White and the Burr Oaks called *Quercus Bebbiana*.

The Arboretum is too far north to make possible here a very large collection of Oaks, and of the fifty-five species which are trees in the United States it has been found possible to grow here successfully only the following: *Quercus borealis* and its variety *maxima*, *Q. Shumardii* var. *Schneckii*, *Q. ellipsoidalis*, *Q. palustris*, *Q. georgiana*, *Q. velutina*, *Q. ilicifolia*, *Q. rubra*, *Q. marilandica*, *Q. Phellos*, *Q. macrocarpa*, *Q. lyrata*, *Q. stellata*, *Q. alba*, *Q. bicolor*, *Q. montana*, and *Q. Muehlenbergii*, only seventeen species. Among the species which are shrubs

and not trees there are in the Arboretum only *Q. prinoides* and a few of the Rocky Mountain species which grow very slowly and give little promise of success. Some of the handsomest of the American Oaks, including all the species confined to the southern states, to the Pacific coast region, and to Arizona and New Mexico, cannot be seen growing in the Arboretum. No evergreen Oak can support this climate, and the Oaks of western Europe are usually short-lived in eastern America. The deciduous leaved Oaks of Japan, Korea, and northern and western China grow well in the Arboretum, and some of the species produce good crops of fruit. The largest Asiatic Oaks in the Arboretum are plants of *Quercus variabilis* and *Q. dentata* on Oak Path near its southern end. The principal collection of Asiatic Oaks, however, is on the southern slope of Bussey Hill, between Azalea Path and the Bussey Mansion. In the mixed plantation near the summit of Peter's Hill are many Oak-trees, including large plants of the Japanese species. Scattered through the Oak-plantations are several hybrids of American species, and no opportunity is lost to increase the number of these hybrids which are now known to occur between various species growing in different parts of the country. All of these hybrids are interesting, and some of them are handsome trees, like *Quercus Comptonae*, for example, a hybrid of *Quercus lyrata* and the southern Live Oak, (*Quercus virginiana*), one of the most splendid Oak trees of America but unfortunately of too tender blood to bear the rigor of a northern winter.

The early spring is one of the seasons when our northern Oaks can be studied to good advantage, for the color of the very young leaves and the amount and character of their hairy covering is different on each species. These characters are constant from year to year, and it is easier to distinguish, for example, a Black Oak (*Quercus velutina*) from a Scarlet Oak (*Q. coccinea*) by the unfolding leaves than it is by the mature leaves, which on some individuals of these species are hardly distinguishable. The young leaves of Oak-trees, apart from their scientific interest, appeal to persons interested in the beauties of nature, for some of them are exquisite in color, and more beautiful even than in the late autumn when the leaves of several of our Oaks are brilliant features of the American forest.

*Cornus florida*, which adds so much to the woodland beauty of eastern North America from southern New England to Texas, was covered here last autumn with inflorescence-buds which appear during the summer on short stems at the end of the branchlets between the upper pair of leaves, and consist of a cluster of minute flower-buds enclosed in four scales which are brown and more or less hairy during the winter; in spring the stalk of inflorescence lengthens from a quarter of an inch to an inch and a half, and the scales which have protected the flower-buds open and expand, turn pure white and form a flat corolla-like cup from three to four inches in diameter. The enlarged pure white scales which surround the flower-clusters are the conspicuous part of the inflorescence, for the flowers themselves are minute and yellow-green. On many of the trees this spring in the neighborhood of Boston the white scales are discolored by dirty red-brown streaks which make the trees seen from a short distance appear pink. The



cause of this discoloration is not evident, although it may have been caused by the cold of Easter Monday following several days of unseasonably hot weather. At that time, however, the inflorescence-buds of *Cornus florida* had scarcely begun to swell. Whatever the cause of the injury its occurrence this year, when there is an unusual bloom, is doubly unfortunate, for the Flowering Dogwood often loses its flower-buds entirely in New England as we are close to the northern limit of the range of distribution of this tree, which further south flowers more profusely and develops larger bud-scales. Forms of this tree with the scales which surround the flower-clusters varying in color from light to dark red (var. *rubra*) occasionally occur in southern woods, and some of these forms have been propagated by nurserymen and are popular garden plants, especially in the neighborhood of Philadelphia, where there are many specimens of the "Red-flowered Dogwood." Several plants of this variety are now blooming by the shores of Jamaica Pond in Boston where they are flowering more abundantly than usual, for the flower-buds of this variety appear to be less hardy than those of the typical form. This is unfortunate, for when the red and white-flowered trees are planted together in masses they produce when in flower a brilliant effect. There is a form of *Cornus florida* with pendulous branches, and another on which the flowers are called double from the presence of an inner row of white inflorescence-scales. These abnormal forms, however, have little to recommend them to the lovers of handsome trees. *Cornus florida* is as handsome in the autumn as it is in the spring, for the upper surface of the leaves turns bright red, the lower surface retaining its pale summer tint, and the abundant clusters of scarlet lustrous fruits are conspicuous and beautiful. Not less beautiful in autumn are two trees with bright yellow fruit which have recently been found, one near Oyster Bay, Long Island, and the other in North Carolina.

**Cornus Nuttallii.** This inhabitant of the coniferous forests of the coast region of the Pacific states is a near relative of *Cornus florida* and a much larger and handsomer tree, and the largest probably of all the Dogwoods, as specimens one hundred feet high occur in the Redwood forests of northwestern California. The cup under the flower-clusters formed by the scales is sometimes six inches across and therefore larger than that of any of the other Flowering Dogwoods. These scales do not, like those of *Cornus florida*, enclose during the winter the whole inflorescence but surround only its base. The unprotected flower-buds are therefore more liable to injury from cold than those of the eastern tree, and it would hardly be possible to obtain flowers anywhere in the eastern states, even if the tree could be kept alive. In England it has proved difficult to grow, although small trees have occasionally flowered there and in France.

**Cornus kousa** is the "Flowering Dogwood" of Japan and China, differing from the American tree in the coalition of the fruits into a solid mass, and in the inflorescence-scales which do not enclose the bud even in part, but stand out below it at right angles to the stem. They enlarge and turn creamy white before the flower-buds open, and are sharp pointed with edges which do not overlap and are smaller than those of

the eastern American tree. *Cornus kousa* blooms three or four weeks later than *Cornus florida*, and the flower-buds have not been injured here in the coldest winters. The leaves turn scarlet in the autumn when the plants are conspicuous from the red clusters of fruit hanging on long stalks. This small Japanese tree is still too seldom seen in our gardens. The best specimen in the neighborhood of Boston is in Mt. Auburn Cemetery in Cambridge; on a Long Island estate there is a grove of perhaps a hundred trees which in the autumn when covered with fruit make a wonderful display of color. The form of *Cornus kousa* discovered by Wilson in western China has now flowered in the Chinese Collection on Bussey Hill for three or four years and promises to be even a handsomer plant than the Japanese type, for the scales of the inflorescence are broader and closer together, and so form a more complete involucre cup. The Arboretum plant has already produced fertile seeds and this beautiful tree will probably in a few years be more common in American gardens.

**Azaleas.** The large orange red flowers of *Rhododendron (Azalea) japonicum* are fast opening, and although the plants on the lower side of Azalea Path are not as full of flowers this spring as usual there are flowers enough to show their beauty. *Rhododendron japonicum* is a common shrub on grass-covered foothills of the mountains of central Japan where it is a vigorous shrub from three to six feet high with stout erect stems and clustered flowers from an inch and a half to two inches in diameter which open as the leaves unfold. More beautiful is the hybrid Azalea Louisa Hunnewell (*Rhododendron Kosterianum* var. *Louisa Hunnewell*) which was raised at Wellesley by crossing *R. japonicum* with *R. molle* (the *R. sinense* of many authors), and is the handsomest of the hybrid Azaleas. A number of plants of this hybrid are now in flower on the lower side of Oak Path near its junction with Azalea Path, and opposite a group of plants of *Rhododendron japonicum*. On the lower side of Oak Path, near the junction with Azalea Path, plants of a hybrid between *Rhododendron obtusum amoenum* (the well known *Azalea amoena* of gardens) and *R. obtusum Kaempferi* (*Azalea Kaempferi*) are now in bloom. This hybrid was raised at the Arboretum several years ago by Jackson Dawson and has been named *Rhododendron Arnoldianum*. The plants are dwarf in habit and the flowers on the different plants vary in color between that of the flowers of the two parents. A few of the plants in this group are worth propagating for the edges of beds and for the rock garden.

**Two American Azaleas.** Plants of *Rhododendron nudiflorum* and *R. roseum* are in bloom on the lower side of Azalea Path, and the groups of these plants which are now side by side afford opportunity for the study of these two New England Azaleas. The flowers of *R. nudiflorum*, which are pale pink and open a few days earlier than those of *R. roseum*, have not the fragrance which adds so much to the value of the rose-colored flowers of *R. roseum*. The fact that this plant can grow in soil strongly impregnated with lime will make its cultivation possible, it is hoped, in parts of the country where, on account of lime in the soil, no other *Rhododendron* can be kept alive.